



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

about themselves; on suitable occasions they picket out their ♀ dogs over night, to procure the cross, with constant success. What profitable quality is secured, I do not know; but such is the case. These crosses are not known to be otherwise than fertile; and the result is, in every Indian community there are mongrel dogs shading into coyotés in every degree; all having the clear wolf strain, and some being scarcely distinguishable from a prairie wolf.

The matter of color merits passing mention. The coyoté is as constant in this respect as other feræ, and I think its peculiar coloring can be reasonably traced in certain dogs. The animal is dingy white as a ground color, which remains so on all the under parts; above it is suffused with tawny-brown (bright in summer, paler and more grayish, or quite gray, in winter), this color overlaid with a clouding of black. This black is rarely uniformly distributed; it tends to streakiness along the back and across the shoulders and hips, producing a pattern similar to that of a "brindled" bull-dog. But there is a more striking feature, and one very characteristic of the animal (the brindled gray and black being shared exactly by an ordinary strain of *C. lupus*). The top of the muzzle, back of the ears, and outside of both fore and hind legs, are usually nearly uniformly tawny. This shade is precisely the so-called "tan" of the black-and-tan terrier, and has the same general distribution. In an attempt to trace pedigree, a fact of this sort seems to rank in value with the appearance, in a horse or mule, of the stripes of a quagga-stock.

---

## THE IRREGULAR MIGRATIONS OF BIRDS.

BY T. MARTIN TRIPPE.

---

THE annual migration of birds; their moving north and south in the spring and autumn, is obvious enough to every one. In its various phases it is well discussed in various ornithological works, and is pretty thoroughly understood, comparatively speaking at least. But in addition to their vernal and autumnal changes of habitat, movements occasionally take place among birds not depending upon the seasons; invasions as it were of certain prov-

inces where they were before unknown, and a disappearance from their former range. Similar movements take place and, indeed, are constantly going on, among all ranks of the animal and vegetable kingdoms, though owing to their preëminent mobility, birds afford the most conspicuous examples, excepting, perhaps, the class of insects. The slow but sure progress of the Norway rat from the east is well known, it having gradually spread itself in the course of one hundred and fifty years, from Persia to the Pacific Ocean. The steady eastward march of the Colorado potato bug is another example, while among plants, *Leucanthemum vulgare* and *Rudbeckia hirta* afford familiar instances.

Audubon speaks of the chestnut-sided warbler as one of the rarest Sylviæ of his day. In his "Ornithological Biography," he tells us that he searched for it for years in vain; and finally on obtaining five specimens in the same spring, considered himself extremely fortunate. At the present day it is, in the very regions where Audubon spent years in collecting, one of the commonest warblers; and the most inexperienced collector could shoot, not five, but five hundred in one season; indeed I have seen it far outnumbering all the other species together, and literally swarming in the woods. At the same time, the mourning warbler, rare in the time of Wilson and Audubon, remains quite as much so still; only in certain other localities it has been found very abundant. Now it is not to be supposed that the former species could have been common in the eastern states, and yet have eluded the observation of Audubon; and it is not at all probable that their present abundance is owing to the natural increase of the species. Plainly there must have been a migration or extension of range from some other region where it was at that time abundant; and in the same manner the next fifty years may see the mourning warbler extending its limits further and further eastward from Minnesota, where it is now common, until it is as abundant in the Atlantic States as the chestnut-sided warbler.

A somewhat similar case, but occurring in a much more limited space of time, happened in my own experience. In a series of several years' close observation at Orange, New Jersey, I searched for the great-crested flycatcher (*Myiarchus crinitus*), year after year, but all in vain; and what made the fact very singular was, that twelve or fifteen miles off, I had seen the bird sufficiently often to convince me that, if not common, it was by no means rare. Yet

for some inexplicable reason it did not inhabit the country immediately about Orange, for, although in the woods nearly every week for years, I never saw it until, after I had almost despaired of ever finding it, I did succeed in shooting a single specimen. This was in the fall; the next spring I saw a pair. In the summer, I went away; and, after an absence of two years, returning to Orange, I strolled through the woods, my old hunting grounds, and, to my surprise, almost the first bird I saw was the great-crested flycatcher. Subsequently I scarcely ever took a walk through the woods, without seeing or hearing it.

Now for what reason it had neglected quite an extensive range, in every way suited for its habits, and what impelled it so suddenly to invade and occupy that region, I cannot possibly imagine, as the woods had undergone but little change in that brief period and that little by no means prejudicial to its habits.

The purple finch was another instance of the same character, though less striking, from its known erratic disposition. For three years, I never saw more than a single pair; then it made its appearance during an unusually cold and stormy fall, in large numbers, and after that, for several years it was a regular spring and autumn visitor, so that I came to look for it as regularly as the robin or fox sparrow. The pine finch, also erratic, I never saw at all, for five years; then it appeared in great numbers just before a severe winter, and thereafter, for a space of several years, it was a regular winter visitor, staying till late in March, and coming as regularly in mild seasons as in cold.

In the time of Wilson, the redheaded woodpecker was one of the very commonest birds of the orchard and farm; and so abundant and familiar were they that, at the time of his writing his account of that bird, he says he knew of several nests within a few miles of Philadelphia. At the present day however, the redheaded woodpecker is not a frequent bird in the vicinity of towns and villages of the regions of which Wilson wrote. At Orange, I never saw more than a dozen individuals in any one year; and all of these, with very few exceptions, were young birds in the fall, found with few or no exceptions, on the edges of heavy timber, and never in orchards or anywhere near the outskirts of villages. I do not speak from very extended experience, but in the course of many pedestrian tours through northern New Jersey and southeastern New York, I never found this bird either common or familiar.

Yet at the west, it has now exactly the habits described by Wilson, frequenting the orchards and coming into the busiest streets of considerable towns with the freedom and unconcern of the warbling vireo and chipping sparrow; indeed, so familiar are they that they frequently alight on the roofs of houses, and tap on the shingles, looking down occasionally, with the utmost *sang froid*, upon the passers-by. Here, if I mistake not, is a gradual withdrawal from certain regions of country, and a change in the habits of those few remaining.

A similar disappearance has taken place, from some localities at least, of the hairy woodpecker. Of this bird I never shot more than a single specimen at Orange, though hunting for it for many years, through quite an extensive range suitable for its habitat. Yet according to Wilson, it was everywhere one of the most abundant and familiar birds in the Atlantic States; an observation indeed, made by other authors, and which I have confirmed myself at several points, yet for some unaccountable reason it has failed to take possession of a considerable region, admirably adapted apparently to his habits; or, if it ever did occupy it, for some equally unaccountable cause, has almost wholly deserted it.

The Carolina parrakeet is another instance of a gradual withdrawal from a former range, the bird rarely appearing now, where formerly it was quite abundant. This may be partially accounted for indeed, by the settlement of the country; the valley of the Ohio, where it was formerly common, having, in the course of half a century, been converted from a wilderness into a thickly settled country. But this explanation is only partially satisfactory; for in its former range are still large tracts of almost primitive wilderness, where it might find every requisite for its existence.

In certain portions of Colorado the raven is now a rare bird where, as the miners have informed me, it was very common, fifteen, or even ten years ago.

Some of these migrations may be easily explained. Many of them occur through human agency; others through climatic modifications. As the settlement of the western frontiers extends, the quail and the prairie hen, finding abundance of food, extend their range correspondingly; and as trees are planted on the plains,\*

---

\*A curious question arises here. The vast tract of treeless prairie lying between the Missouri river and the Rocky Mountains, forms at present, a very complete barrier between the sylvan species of the two regions, which they seldom cross; but as the settle-

the insectivorous and arboreal species will become abundant in regions where they previously could not exist. The destruction of forests, and the draining of swamps must, of course, result in the diminution of the numbers of the forest and swamp loving species, as seen very plainly in England at the present day; and again, the protection afforded from predaceous animals, by the presence of man, and the thinning out of birds of prey, must necessarily result in a great increase of the smaller and inoffensive tribes. On the other hand, the persecution to which certain species, mainly rapacious, or valuable for food, are subjected, results in their thinning out or even extermination, unless, as often happens, they migrate to other and wilder regions.

Climate influences many extraordinary migrations. A severe winter will cause northern birds to migrate much further south than usual, and a long hot summer will entice southern birds to visit us, which we do not see in ordinary seasons. Such migrations, however, are only temporary, although I am inclined to think that birds may subsequently revisit regions, purely from choice, to which in the first place, they were compelled to fly for safety. And again, extraordinary seasons may have an indirect influence upon these movements of birds. In a recent interesting little article in the *NATURALIST*, Prof. Shaler shows how the flora of New England was probably modified by the recent cold winter; and of course, a modification of the flora would result in a corresponding modification of the avi-fauna. Thus, the coniferous trees being reduced in numbers, there would be a similar reduction in the abundance of pine grosbeaks, finches, crossbills, and other species, more or less dependent upon the *Coniferæ* for food. The insect fauna also, closely connected with, and necessarily affected by the slightest change in the flora, must undergo some readjustment, resulting in a corresponding change among the insectivorous birds.

---

ment of the plains proceeds and trees are planted, this barrier will gradually cease to exist, and the arboreal faunæ of the Rocky mountains and the east will extend their limits and meet each other. What will be the result on such allied congeneric species or varieties as *Oporornis agilis* and *O. McGillivrayi*, *Sitta Carolinensis* and *S. aculeata*, etc? Will each preserve its characteristics; or will a hybrid race arise, completely merging the one into the other? *Sturnella Ludoviciana* and *S. neglecta*, usually regarded at the present day as varieties of the same species, exist side by side, retaining in a general way at least, certain peculiar notes and habits. On the other hand, *Colaptes auratus* and *C. Mexicanus*, universally admitted as valid species, blend into one another by imperceptible gradations in regions where their habitats adjoin.

In many cases, however, it seems impossible to assign any reason for these irregular migrations. What caused the chestnut-sided warbler to become so abundant in the eastern states, where it formerly was so rare; what influenced the Carolina parakeet and the raven to desert regions where they were once common; and what caused the appearance of the great-crested flycatcher about Orange, where for years it had not been seen; and why the hairy woodpecker shuns the same region, are questions that will puzzle an ornithologist to answer. Certainly, in none of these cases, was persecution, or lack of proper shelter and food, or change of climate the impelling cause. It may have been the same motive that influenced them, that oftentimes has impelled the races of men to migrate *en masse*, as in the days of the Huns and Goths,—the mere desire to see and possess new countries, with the vague expectation of bettering their condition thereby. Certain it is that, whatever the motive, the tribes of birds migrate here and there, invade and hold new regions, and disappear from others; and move to and fro, upon the face of the earth, in the same manner as do the tribes of men.

---

## DISCOVERY OF AN OCTOPUS INHABITING THE COAST OF NEW ENGLAND.

BY PROF. A. E. VERRILL.

---

ONE of the most interesting of the numerous discoveries made during the dredgings carried on in the Bay of Fundy last summer, in connection with the work of the U. S. Fish Commission, was a fine new species of Octopus (*O. Bairdii* Verrill) which inhabits the deeper waters of that region. It seems to be not uncommon below seventy-five fathoms, judging from the fact that we met with it in five different localities. All the specimens obtained were males, and it is probable that the females are much larger than the males, as in other species of the genus.

Most of the specimens were kept alive for several days, in order to observe its habits. Several good drawings were made by Mr. J. H. Emerton, showing its different attitudes. When at rest it remained at the bottom of the vessel, adhering firmly by some of